Training for the Integration of Decisions and Ecosystems Science

University of New Hampshire

Why TIDES?

Ask Kathryn Rosengren, and she'll tell you that TIDES combines the two things she loves most—people and the coasts.

"I have always loved marine science *and* working with groups of people. TIDES is one of the only graduate programs in the country that brings those interests together. There's a tremendous need for people who can translate science and help scientists and decision makers communicate more effectively—that's what TIDES is preparing me to do."

Why UNH?

"It's exciting to be part of an emerging field, particularly at UNH, where not only do you learn in the classroom, but you get to apply what you've been learning within a community. I'm also learning from my fellow students. The faculty encourage us to work closely together and share our insights and experience. Being part of such a tight-knit, supportive group is unusual in graduate school."

What's next?

"Awareness of the need for science translation is growing, and although I would like to work in New Hampshire's Great Bay area, I can see putting my TIDES experience to work anywhere in the country. It's a versatile degree!"

Catch a Rising TIDE

Interested in working at the interface of science and the decisions shaping the future of coastal environments and communities? Consider the University of New Hampshire's (UNH) new graduate program in Integrated Coastal Ecosystem Science, Policy, and Management, also known as TIDES. This program builds the knowledge and skills needed to connect science with decision making through a combination of course work and a field-based internship at a Reserve in the National Estuarine Research Reserve System (NERRS). The program requires 36 credits of graduate training and culminates in a non-thesis, project-based Master's degree. The NERRS Science Collaborative is supporting two, fully funded, two-year TIDES fellowships that cover tuition, stipend, and health insurance. Students from diverse academic backgrounds are encouraged to apply!

The TIDES Experience

TIDES students combine coursework at UNH with field-based work at a NERRS site. In the process, they gain knowledge and skills in the following:

- Integrative science that links coastal, estuarine and watershed management;
- Public participation in the generation of new knowledge and decision options;
- Ecosystem-based and adaptive governance;
- Facilitation of collaborative research group processes.

TIDES Coursework

Most students complete one year of coursework before beginning an internship. In general, TIDES students take courses from the following areas:

- Coastal & Estuarine Ecology
- Approach to Research
- Statistics & Data Analysis
- Communicating Coastal Issues
- Resource Management
- Policy and Governance
- Planning & Facilitating Public Participation & Collaboration
- Conflict Resolution

An applicant's advising committee may require a heavier emphasis on certain courses, depending on his or her previous coursework.

The TIDES Internship

An internship at one of 28 Reserves around the country is at the heart of the TIDES experience. Each internship is linked to a NERRS Science Collaborative sponsored research project, designed to insure that investigators work with intended users of the science before, during, and after the generation of knowledge. These projects focus on one of four issues: impacts of land use change, habitat change and restoration, estuarine contamination, and the management of stormwater and nonpoint source pollution.

TIDES interns help coordinate and facilitate collaborative ecosystem research within these projects. They provide input on how multi-stakeholder scientific discussions are structured and facilitated for maximum impact. They also may organize, implement, and evaluate interactions between researchers and intended users.

Most students complete one year of coursework before beginning their internships, which may be one or two terms (three to six months) in duration, depending on a student's background and available projects at the Reserves.

National Estuarine Research Reserve System Science Collaborative

A collaborative approach to restoring native oysters in Oregon is one project funded by the Science Collaborative in 2010.

TIDES at a Glance

TIDES is an interdisciplinary graduate program designed to help students build the skills needed to link science to coastal decision making.

Host Institution
Department of Natural Resources & the Environment Graduate Programs, University of New Hampshire

Degree Conferred
Master of Science, non-thesis, 36 credit hours, including a field-based internship and project

Course of Study
Students will take courses from the following areas:

- Coastal & Estuarine Ecology
- Approach to Research
- Statistics/Data Analysis
- Communicating Coastal Issues
- Resource Management
- Policy and Governance
- Facilitation
- Conflict Resolution
- Public Participation

Funding Options
Two competitive fellowships are available.

Application Deadline
February 1

Who to Contact
Dr. Mimi Larsen Becker
TIDES Program Coordinator
mimi.becker@unh.edu

(Please note that email is the most effective approach to getting your questions answered and application process started.)

How Do I Apply?

Step 1: The application deadline is February 1. Contact Dr. Mimi Larsen Becker, the faculty advisor for the program *by email* at **mimi.becker@unh.edu**

Step 2: Apply through the UNH Graduate School. This step includes the submission of a standard application form, available through the Graduate School, relevant transcripts, and GRE scores, as well as the modified recommendations and personal statement essays requested by the program.

For general information on TIDES and application requirements, consult Dr. Becker by email. You can also log on to http://www.naturalresources.unh.edu/graduate/index4-tides.html

For information about the NERRS Science Collaborative, please go to http://nerrs.noaa.gov/RCDefault.aspx?ID=364

Or, contact Mr. Kalle Matso: 603-862-3508; kalle.matso@unh.edu

About the NERRS

The National Estuarine Research Reserve System is a network of 28 areas, representing different biogeographic regions of the United States, that are protected for long-term research, water-quality monitoring, education and coastal stewardship.

The System is a partnership program between the National Oceanic and Atmospheric Administration (NOAA) and the coastal states. NOAA provides funding, national guidance and technical assistance. Each reserve is managed by a lead state agency or university, with input from local partners.

Reserve staff work with local communities and regional groups to address natural resource management issues, such as nonpoint source pollution, habitat restoration and invasive species. Through integrated research and education, the Reserves help communities develop strategies to deal successfully with these coastal resource issues.

Reserves provide adult audiences with training on estuarine issues of concern in their local communities. They offer field classes for K through 12 students and support teachers through professional development programs in marine education. Reserves also provide long-term water quality monitoring, as well as opportunities for both scientists and graduate students to conduct research in a "living laboratory."

www.nerrs.noaa.gov